

How to implement SIFT algorithm

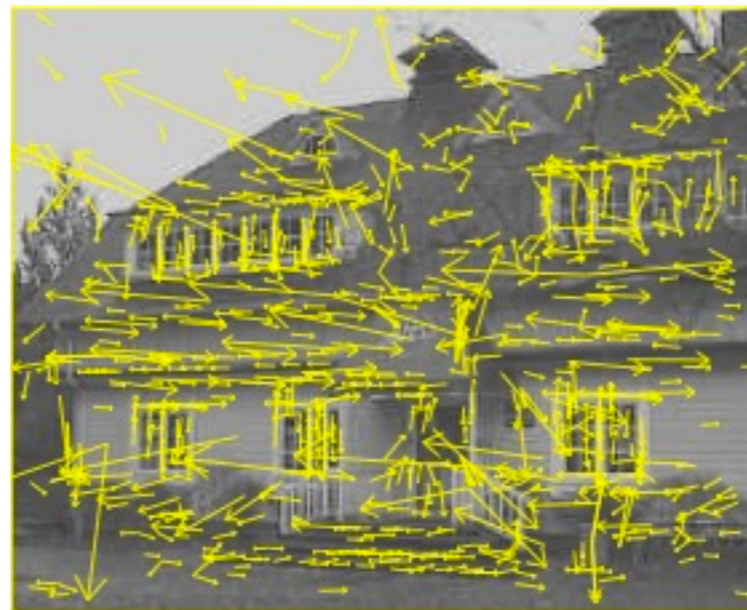
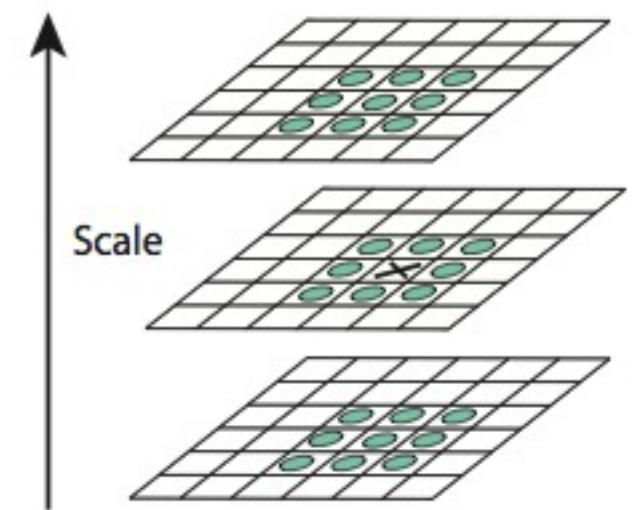
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steps

- Find SIFT keypoints
- Match keys

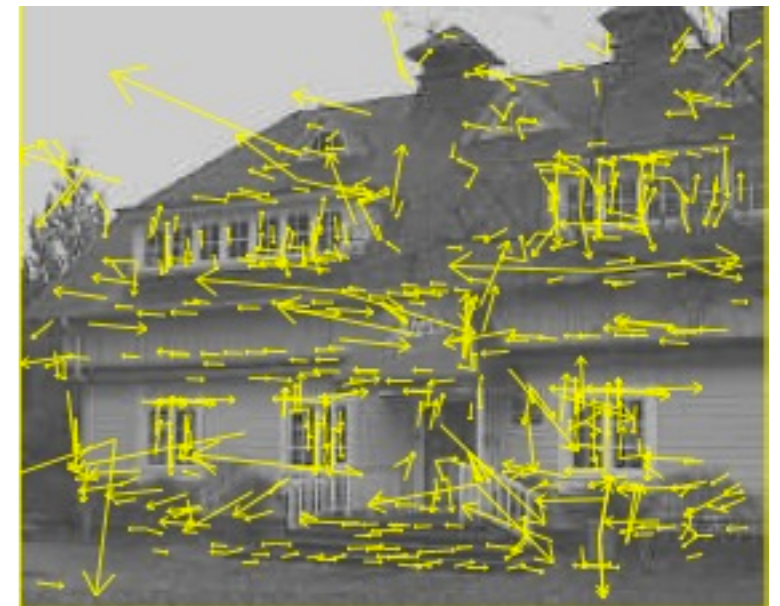
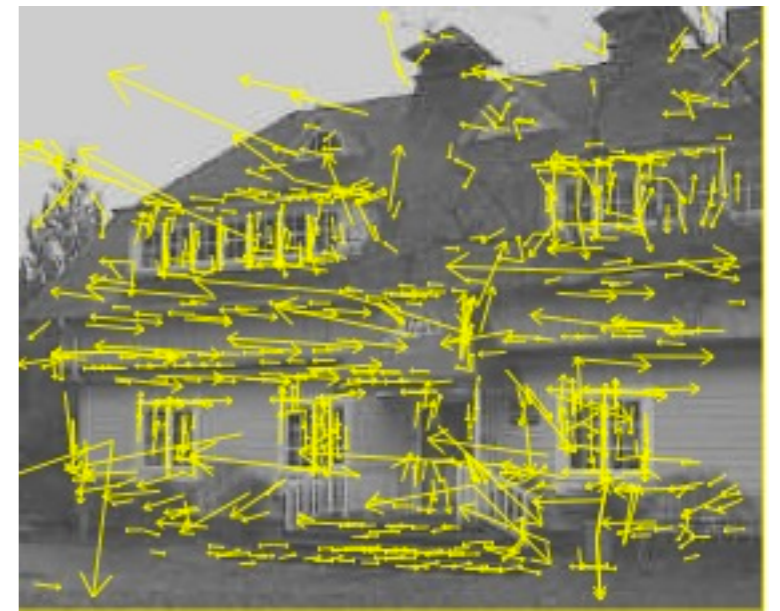
How to Find SIFT keypoints

- Compare each pixel to:
 - 8 neighbors in current image
 - 9 neighbors in scale above
 - 9 neighbors in scale below
- Take pixel if larger or smaller than all of them



Keypoint Localization

- Reject points with low contrast and localized along an edge
- Use Quadratic Taylor Expansion of the scale-space function to reject keypoints which have lower contrast
- Use Difference Of Gaussians function to reject near-edge keypoints



Match keys from two images

- Import two images
- Create a new image that join two images vertically
- Match the keys in lists `keys1` to their best matches in `keys2`
- draw a line on the image from `keys1` to match